# IDAHO CONTENT STANDARDS GRADE 6 MATHEMATICS

### **Standard 1: Number and Operation**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 1.1: Understand and use numbers.	magnitudes and relative	6.M.1.1.2 Explain the interrelationship of fractions, decimals, and percents. (317.01.b)	6.M.1.1.3 Locate the position of integers on a number line.		6.M.1.1.5 Apply number theory concepts (prime, composite, prime factorization) and identify common factors and common multiples. (317.01.e)	6.M.1.1.6 Solve problems using the 4-step process of problem solving (explore, plan, solve, and examine). (318.01.b)	6.M.1.1.7 Describe the use of integers in real-world situations. (317.01.f)	6.M.1.1.8 Use appropriate vocabulary.	
Goal 1.2: Perform computations accurately.	6.M.1.2.1 Recall basic multiplication and division facts from 12 x 12 Times Table. (317.02.d)	6.M.1.2.2 Add, subtract, multiply, and divide whole numbers, decimals, and simple fractions (including unlike denominators). (317.02.a, 317.02.b, 317.02.c, 317.02.g)	6.M.1.2.3 Evaluate numerical expressions with whole numbers using the order of operations (excluding exponents). (317.02.e)	6.M.1.2.4 Select and use an appropriate method of computation from mental math, paper and pencil, calculator or a combination of the three. (317.02.h)	6.M.1.2.5 Use a variety of strategies to solve real life problems. (318.01.a)	6.M.1.2.6 Use appropriate vocabulary and notations. (317.02.i)			
Goal 1.3: Estimate and judge reasonableness of results.		6.M.1.3.2 Explain when estimation is appropriate. (317.03.b)	6.M.1.3.3 Identify whether a given estimate is an overestimate or underestimate. (317.03.c)	6.M.1.3.4 Use a four-function calculator to solve complex grade-level problems.	6.M.1.3.5 Formulate conjectures and discuss why they must be or seem to be true. (318.02.c)	6.M.1.3.6 Use appropriate vocabulary. (317.03.d)			

### **Standard 2: Concepts and Principles of Measurement**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 2.1: Understand and use U.S. customary and metric measurements.		standard measuring devices.	6.M.2.1.3 Apply understanding of relationships to solve real- world problems related to elapsed time. (319.01.f)	6.M.2.1.4 Given the formulas, find the perimeter or circumference and area of triangles, circles and parallelograms (all kinds). (319.01.c, 321.01.e)	measurement within each	6.M.2.1.6 Solve problems involving perimeter and area of rectangles. (321.01.d)	6.M.2.1.7 Use appropriate vocabulary and notations. (319.01.g)		
Goal 2.2: Apply the concepts of rates, ratios, and proportions.	6.M.2.2.1 Identify and write ratios and scales (on a map). (319.03.a)								
Goal 2.3: Apply dimensional analysis.	No objectives at this grade level.								

## IDAHO CONTENT STANDARDS GRADE 6 MATHEMATICS

### **Standard 3: Concepts and Language of Algebra and Functions**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 3.1: Use algebraic symbolism as a tool to represent mathematical relationships.	6.M.3.1.1 Discuss the meaning and use of variables in simple expressions and equations. (320.01.a)	6.M.3.1.2 Translate simple word statements into algebraic equations. (320.01.b)	6.M.3.1.3 Read and use symbols of "<," ">," and "=" to express relationships. (320.01.c)						
Goal 3.2: Evaluate algebraic expressions.	6.M.3.2.1 Use the following properties in evaluating numerical expressions: commutative, associative, identity, zero, inverse, and distributive. (320.02.a)	6.M.3.2.2 Evaluate simple algebraic expressions using substitution.							
Goal 3.3: Solve algebraic equations and inequalities.	6.M.3.3.1 Solve one-step equations with whole numbers. (320.03.a)								
Goal 3.4: Understand the concept of functions.	6.M.3.4.1 Extend simple patterns and state a rule (function) that generates the pattern using whole numbers, decimals, and fractions as inputs. (323.01.a)	6.M.3.4.2 Describe and extend patterns by using manipulatives and pictorial representations. (323.01.b)	6.M.3.4.3 Use mathematical models to show change in a real world context. (323.01.c)	6.M.3.4.4 Use appropriate vocabulary. (323.01.d)					
Goal 3.5: Represent equations, inequalities and functions in a variety of formats.	No objectives at this grade level.								
Goal 3.6: Apply functions to a variety of problems.	6.M.3.6.1 Use patterns to represent and solve simple problems.								

### **Standard 4: Concepts and Principles of Geometry**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 4.1: Apply concepts of size, shape, and spatial relationships.		various angles and shapes using appropriate tools.	6.M.4.1.3 Apply fundamental concepts, properties, and relationships among points, lines, rays, and angles. (321.01.c)	reflections, translations, and	congruence, similarities, and	6.M.4.1.6 Discuss the spatial relationship between two- and three-dimensional objects. (321.01.f)	6.M.4.1.7 Use appropriate vocabulary and symbols. (323.01.h)		
Goal 4.2: Apply the geometry of right triangles.	No objectives at this grade level.								
Goal 4.3: Apply graphing in two dimensions.	6.M.4.3.1 Identify and plot points in the first quadrant on a coordinate plane. (321.02.a)								

## IDAHO CONTENT STANDARDS GRADE 6 MATHEMATICS

### **Standard 5: Data Analysis, Probability, and Statistics**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 5.1: Understand data analysis.	6.M.5.1.1 Read and interpret tables, charts, and graphs, including broken line graphs, bar graphs, frequency tables, line plots, and circle graphs. (322.01.a)	6.M.5.1.2 Explain and justify stated conclusions drawn from tables, charts, and graphs. (322.01.b)	6.M.5.1.3 Use appropriate vocabulary and notations. (322.01.c)						
Goal 5.2: Collect, organize, and display data.	6.M.5.2.1 Collect, organize, and display the data with appropriate notation in tables, charts, and graphs, including broken line graphs, bar graphs, frequency tables and line plots. (322.02.a)								
Goal 5.3: Apply simple statistical measurements.	6.M.5.3.1 Find measures of central tendency – mean, median, and mode – with simple sets of data. (322.03.a)	6.M.5.3.2 Calculate the range of a set of data. (322.03.b)							
Goal 5.4: Understand basic concepts of probability.	6.M.5.4.1 Predict, perform, and record results of simple probability experiments. (322.04.a)	6.M.5.4.2 Use the language of probability. (322.04.b)							
Goal 5.5: Make predictions or decisions based on data.									

### IDAHO CONTENT STANDARDS GRADE 7 MATHEMATICS

### **Standard 1: Number and Operation**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 1.1: Understand and use numbers.	7.M.1.1.1 Compare magnitudes and relative magnitudes of rational numbers, including integers, fractions, and decimals. (327.01.a, 327.01.c)	7.M.1.1.2 Solve problems requiring the conversion between simple decimals, fractions, ratios, and percents. (327.01.b)	7.M.1.1.3 Locate the position of rational numbers on a number line. (327.01.e)	7.M.1.1.4 Rewrite multiple factors using exponents. (327.02.c)	7.M.1.1.5 Apply the number theory concepts of primes, composites, and prime factorization and find the Least Common Multiple (LCM) and the Greatest Common Factor (GCF). (327.01.d)	7.M.1.1.6 Recognize pertinent information for problem solving. (328.01.b)	7.M.1.1.7 Describe the use of integers in real-world situations.	7.M.1.1.8 Use appropriate vocabulary.	
Goal 1.2: Perform computations accurately.	7.M.1.2.1 Recall the common equivalent fractions, decimals, and percents of halves, fourths, and tenths.	7.M.1.2.2 Add, subtract, multiply, and divide whole numbers, fractions and decimals; and add, multiply, and divide integers. (327.02.a, 327.02.d)	7.M.1.2.3 Evaluate whole numbers in exponential form.	7.M.1.2.4 Evaluate numerical expressions using the order of operations with whole numbers and decimals. (327.02.b)	7.M.1.2.5 Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three. (327.02.e)	7.M.1.2.6 Use a variety of strategies including common mathematical formulas to compute problems drawn from real life situations. (328.01.a)	7.M.1.2.7 Use appropriate vocabulary and notations. (327.02.f)		
Goal 1.3: Estimate and judge reasonableness of results.	7.M.1.3.1 Estimate to predict computation results. (327.03.a)	7.M.1.3.2 Explain when estimation is appropriate and describe the usefulness of an estimate as opposed to an exact answer. (327.03.b)	7.M.1.3.3 Identify whether a given estimate is an overestimate or underestimate. (327.03.c)	7.M.1.3.4 Use a four-function calculator to solve complex grade-level problems.	7.M.1.3.5 Formulate conjectures and discuss why they must be or seem to be true. (328.02.c)	7.M.1.3.6 Use appropriate vocabulary and notations. (327.03.d)			

### **Standard 2: Concepts and Principles of Measurement**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 2.1: Understand and use U.S. customary and metric measurements.	7.M.2.1.1 Select and use appropriate units and tools to make formal measurements in both systems. (329.01.a)	and content problems using standard measuring devices.	7.M.2.1.3 Explain the differences between perimeter, area, and volume (capacity) and their measures within both systems. (329.01.c)	7.M.2.1.4 Given the formulas, find the perimeter, circumference, or area of triangles, circles, and quadrilaterals. (331.01.e)	7.M.2.1.5 Convert units of measurement within each system. (329.01.e)	7.M.2.1.6 Solve problems involving perimeter and area of rectangles and triangles. (329.01.d)	7.M.2.1.7 Use appropriate vocabulary and notations. (329.01.f)		
Goal 2.2: Apply the concepts of rates, ratios, and proportions.	7.M.2.2.1 Explain rates and their relationship to ratios, and use proportions to solve problems represented with a diagram. (329.02.a, 329.03.a)	7.M.2.2.2 Reduce rates to unit rates.							
Goal 2.3: Apply dimensional analysis.	7.M.2.3.1 Identify properly constructed dimensional analysis conversions. (329.04.a)								

## IDAHO CONTENT STANDARDS GRADE 7 MATHEMATICS

### **Standard 3: Concepts and Language of Algebra and Functions**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 3.1: Use algebraic symbolism as a tool to represent mathematical relationships.	7.M.3.1.1 Use variables in simple expressions and equations. (330.01.a)	7.M.3.1.2 Translate simple word statements into algebraic expressions and equations. (330.01.b)	7.M.3.1.3 Use symbols "<," ">,""=," "≠," "≤," and "≥" to express relationships. (330.01.c)						
Goal 3.2: Evaluate algebraic expressions.	7.M.3.2.1 Evaluate simple numeric and algebraic expressions using commutative, associative, identity, zero, inverse, distributive, and substitution properties. (330.02.a)	7.M.3.2.2 Use the order of operations in evaluating simple algebraic expressions. (330.02.b)							
Goal 3.3: Solve algebraic equations and inequalities.	7.M.3.3.1 Solve one-step equations. (330.03.a)								
Goal 3.4: Understand the concept of functions.	7.M.3.4.1 Extend patterns involving rational numbers and describe the rule that generates the pattern. (333.01.a)	7.M.3.4.2 Explain how a change in one quantity impacts a change in another quantity. (333.01.b)	7.M.3.4.3 Use appropriate vocabulary and notations. (333.01.c)						
Goal 3.5: Represent equations, inequalities and functions in a variety of formats.	7.M.3.5.1 Represent a simple set of data in a table, as a graph, and as a mathematical relationship. (333.02.a)								
Goal 3.6: Apply functions to a variety of problems.	7.M.3.6.1 Use patterns and linear functions to represent and solve simple problems. (333.03.a)								

### **Standard 4: Concepts and Principles of Geometry**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
	relationships among types of	various angles and shapes using appropriate tools. (331.01.b)	1 1 1	7.M.4.1.4 Explain and model the effects of reflections, translations, and rotations on various shapes. (331.01.g)	congruence, similarities, and	7.M.4.1.6 Describe the concept of surface area and volume (capacity). (331.01.f)	7.M.4.1.7 Use appropriate vocabulary and symbols. (331.01.h)		
Goal 4.2: Apply the geometry of right triangles.	No objectives at this grade level.								
Goal 4.3: Apply graphing in two dimensions.	7.M.4.3.1 Identify and plot points on a coordinate plane.								

## IDAHO CONTENT STANDARDS GRADE 7 MATHEMATICS

### **Standard 5: Data Analysis, Probability, and Statistics**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 5.1: Understand data analysis.	7.M.5.1.1 Read and interpret tables, charts, and graphs, including frequency tables, scatter plots, broken line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. (332.01.a)	7.M.5.1.2 Explain conclusions drawn from tables, charts, and graphs. (332.01.b)	7.M.5.1.3 Use appropriate vocabulary and notations. (332.01.c)						
Goal 5.2: Collect, organize, and display data.	7.M.5.2.1 Collect, organize, and display data with appropriate notation in tables, charts and graphs, including scatter plots, broken line graphs, line plots, bar graphs, and stem-and-leaf plots. (332.02.a)								
Goal 5.3: Apply simple statistical measurements.	7.M.5.3.1 Determine the measures of central tendency – mean, median and mode – with sets of data. (332.03.a)	7.M.5.3.2 Discuss distribution of data, including range, frequency, gaps, and clusters. (332.03.b)							
Goal 5.4: Understand basic concepts of probability.	7.M.5.4.1 Predict, perform, and record results of simple probability experiments. (332.04.a)	7.M.5.4.2 Recognize equally likely outcomes. (332.04.c)	7.M.5.4.3 Explain that probability ranges from impossible to certain (0% to 100%).	7.M.5.4.4 Use the language of probability. (332.04.b)					
Goal 5.5: Make predictions or decisions based on data.	7.M.5.5.1 Make predictions based on simple theoretical probabilities. (332.05.a)	7.M.5.5.2 Use appropriate vocabulary and notations. (332.05.b)							

## IDAHO CONTENT STANDARDS GRADE 8 MATHEMATICS

### **Standard 1: Number and Operation**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 1.1: Understand and use numbers.	8.M.1.1.1 Compare magnitudes and relative magnitudes of rational numbers, including integers, fractions, decimals, percents, and absolute values. (337.01.a)	8.M.1.1.2 Use rational numbers, including percents and ratios, and $\pi$ (pi) to solve problems. (337.01.b)	8.M.1.1.3 Locate the position of rational numbers and positive real numbers on a number line. (337.01.e)	8.M.1.1.4 Convert between standard form, scientific notation, and exponential form. (337.01.c)	8.M.1.1.5 Apply number theory concepts (primes, composites, prime factorization, LCM, GCF). (337.01.d)	8.M.1.1.6 Recognize pertinent information for problem solving. (338.01.b)	8.M.1.1.7 Apply integers in one- and two-step common real-world situations.	8.M.1.1.8 Use appropriate vocabulary.	
Goal 1.2: Perform computations accurately.	8.M.1.2.1 Recall the common equivalent fractions, decimals, and percents of halves, thirds, fourths, fifths, and tenths. (337.02.b)	8.M.1.2.2 Add, subtract, multiply, and divide rational numbers. (337.02.a)	8.M.1.2.3 Evaluate numerical expressions with whole number exponents. (337.02.d)	8.M.1.2.4 Evaluate numerical expressions with rational numbers using the order of operations. (337.02.c)	8.M.1.2.5 Select and use an appropriate method of computation from mental math, paper and pencil, calculator, or a combination of the three. (337.02.e)	8.M.1.2.6 Use a variety of strategies including common mathematical formulas to compute problems drawn from real life situations. (338.01.a)	8.M.1.2.7 Use appropriate vocabulary and notations. (337.02.f)		
Goal 1.3: Estimate and judge reasonableness of results.		8.M.1.3.2 Identify when estimation is appropriate and apply to problem solving situations. (337.03.b)	8.M.1.3.3 Identify whether a given estimate is an overestimate or underestimate. (337.03.c)	8.M.1.3.4 Use a four-function calculator to solve complex grade-level problems.	8.M.1.3.5 Formulate conjectures and justify (short of formal proof) why they must be or seem to be true. (338.02.c)	8.M.1.3.6 Use appropriate vocabulary and notations. (337.03.d)			

#### **Standard 2: Concepts and Principles of Measurement**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 2.1: Understand and use U.S. customary and metric measurements.	8.M.2.1.1 Select and use appropriate units and tools to make formal measurements in both systems. (339.01.a)	8.M.2.1.2 Apply estimation of measurement to real-world and content problems using standard measuring devices. (339.01.b)	8.M.2.1.3 Compare the differences and relationships among measures of perimeter, area, and volume (capacity) within both systems. (339.01.c)	8.M.2.1.4 Given the formulas, find the circumference, perimeter, or area of triangles, circles, and quadrilaterals, and the volume and surface area of rectangular prisms.  (341.01.e)	8.M.2.1.5 Convert units of measurement within each system in problem solving situations. (339.01.e)	8.M.2.1.6 Solve problems involving area of circles and the perimeter and area of rectangles and triangles. (339.01.d)	8.M.2.1.7 Use appropriate vocabulary and notations. (339.01.f)		
Goal 2.2: Apply the concepts of rates, ratios, and proportions.	8.M.2.2.1 Use rates, proportions, ratios, and map scales in problem-solving situations. (339.03.a)	8.M.2.2.2 Determine unit rates in real-world situations.							
Goal 2.3: Apply dimensional analysis.	8.M.2.3.1 Illustrate the interrelationship of measurement units through dimensional analysis conversions. (339.04.a)								

## IDAHO CONTENT STANDARDS GRADE 8 MATHEMATICS

### **Standard 3: Concepts and Language of Algebra and Functions**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 3.1: Use algebraic symbolism as a tool to represent mathematical relationships.	8.M.3.1.1 Use variables in expressions, equations, and inequalities. (340.01.a)	8.M.3.1.2 Translate simple word statements and story problems into algebraic expressions and equations. (340.01.b)	8.M.3.1.3 Use symbols "<," ">,""=," "≠," "≤," and "≥" to express relationships. (340.01.c)						
Goal 3.2: Evaluate algebraic expressions.	8.M.3.2.1 Use and apply the following properties in evaluating algebraic expressions: commutative, associative, identity, zero, inverse, distributive, and substitution. (340.02.a)	8.M.3.2.2 Use the order of operations in evaluating simple algebraic expressions. (340.02.b)	8.M.3.2.3 Simplify algebraic expressions. (340.02.c)						
Goal 3.3: Solve algebraic equations and inequalities.	8.M.3.3.1 Solve one- and two-step equations and inequalities. (340.03.a)	8.M.3.3.2 Match graphical representations with simple linear equations. (340.03.b)							
Goal 3.4: Understand the concept of functions.	8.M.3.4.1 Extend patterns and identify a rule (function) that generates the pattern using rational numbers. (343.01.a)	8.M.3.4.2 Use relationships to explain how a change in one quantity may result in a change in another, and identify the relationship as a positive, negative, or neither. (343.01.b)	8.M.3.4.3 Use appropriate vocabulary and notations. (343.01.c)						
Goal 3.5: Represent equations, inequalities and functions in a variety of formats.	8.M.3.5.1 Represent a set of data in a table, as a graph, and as a mathematical relationship. (343.02.a)								
Goal 3.6: Apply functions to a variety of problems.	8.M.3.6.1 Use patterns and linear functions to represent and solve problems. (343.03.a)								

#### **Standard 4: Concepts and Principles of Geometry**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 4.1: Apply concepts of size, shape, and spatial relationships.	classify relationships among	8.M.4.1.2 Draw and measure various angles and shapes using appropriate tools. (341.01.b)	fundamental concepts, properties, and relationships	8.M.4.1.4 Identify and model the effects of reflections, translations, rotations, and scaling on various shapes. (341.01.g)	congruence, similarities, and	8.M.4.1.6 Explain the concept of surface area and volume (capacity). (341.01.f)	8.M.4.1.7 Use appropriate vocabulary and symbols. (341.01.h)		
Goal 4.2: Apply the geometry of right triangles.	No objectives at this grade level.								
Goal 4.3: Apply graphing in two dimensions.	8.M.4.3.1 Identify and plot points on a coordinate plane. (341.03.a)								

## IDAHO CONTENT STANDARDS GRADE 8 MATHEMATICS

### **Standard 5: Data Analysis, Probability, and Statistics**

Goals:	Objective 1	Objective 2	Objective 3	Objective 4	Objective 5	Objective 6	Objective 7	Objective 8	Objective 9
Goal 5.1: Understand data analysis.	8.M.5.1.1 Analyze and interpret tables, charts, and graphs, including frequency tables, scatter plots, broken line graphs, line plots, bar graphs, histograms, circle graphs, and stem-and-leaf plots. (342.01.a)	8.M.5.1.2 Explain and justify conclusions drawn from tables, charts, and graphs. (342.01.b)	8.M.5.1.3 Use appropriate vocabulary and notations. (342.01.c)						
Goal 5.2: Collect, organize, and display data.	8.M.5.2.1 Collect, organize, and display data with appropriate notation in tables, charts, and graphs, including scatter plots, broken line graphs, line plots, bar graphs, histograms, and stem-and-leaf plots. (342.02.a)								
Goal 5.3: Apply simple statistical measurements.	8.M.5.3.1 Choose and calculate the appropriate measure of central tendency – mean, median, and mode. (342.03.a)	8.M.5.3.2 Explain the significance of distribution of data, including range, frequency, gaps, and clusters. (342.03.b)							
Goal 5.4: Understand basic concepts of probability.	8.M.5.4.1 Model situations of probability using simulations. (342.04.a)	8.M.5.4.2 Recognize equally likely outcomes. (342.01.c)	8.M.5.4.3 Explain that probability ranges from 0% to 100% and identify a situation as having high or low probability.	8.M.5.4.4 Use the language of probability. (342.04.b)					
Goal 5.5: Make predictions or decisions based on data.	8.M.5.5.1 Make predictions based on experimental and theoretical probabilities. (342.05.a)	8.M.5.5.2 Conduct statistical experiments and interpret results using tables, charts, or graphs. (342.05.c)	8.M.5.5.3 Use appropriate vocabulary and notations. (342.05.b)						